REMARKS/ARGUMENTS

Claims 30-65 were pending.

In the Office Action, the Examiner rejected claims 30-52 and 60-65 under 35 USC §101 (the Office Action stated "claims 1-29" and later "claims 30-52 and 60-65" and we interpreted that to mean the latter as claims 1-29 were earlier withdrawn), rejected claims 30-65 under 35 USC §112, first paragraph as failing to comply with the written description requirement, and rejected claims 30-65 under 35 USC §103(a) as being unpatentable over Glynias, et al. (US Patent No. 6,125,383).

In response to the rejection under 35 USC §101, the Examiner is apparently rejecting the claims as lacking limitations to hardware or other physical structures and asserting that software and data alone are nonstatutory subject matter. Applicant respectfully traverses the Examiner's position, but in an effort to advance prosecution, independent claims 30, 53 and 60 have been amended to recite elements that clearly make each of the claims statutory subject matter. Those amendments do not introduce any new matter, as computer embodiments are supported by the original filed application. See, for example, Fig. 3 and related text, such as page 30, lines 9-16.

In response to the rejection under 35 USC §112, first paragraph, Applicant submits that each of the claim terms are supported by the specification. To advance prosecution, some of the claims have been amended to clarify support. The Examiner listed a number of claim terms from claims 30, 53 and 60 and asserted a lack of clear support. Those elements are:

- "data structuring object": At least one example of a data structuring object is disclosed and explained in the specification. See, for example, an intelligent molecular object (IMO), such as an IMO 502, shown in Figures 5, 6, and 7 and described on page 16, lines 5-25 of the originally filed specification, among other references. As described, an IMO reviews "raw" data content and structures that data, and is an example of a data structuring object. See also page 33, lines 27-29 and page 61, lines 18-19. Structuring data might include identification of data subset boundaries and extraction, normalization and access of information contained within those boundaries in order to, for example, compare the information subsets with similar information contained within other data sets for statistical or visualization purposes, or for comparison to submitted queries. For reference, see page 24, lines 10-14. In a specific example of data structuring, data field mapping is done and vectors are generated for accessing specific data fields. See page 20, line 21-24; page 61, lines 31-32 and page 62, lines 1-4. It should be understood that the above references to the specification are not to be construed as limiting the claims, but merely cite examples of support in the specification.

- "native data content": This element is no longer used in the claims, however it should have been apparent that "native data" is taught by teachings of the use of raw data, such as described in a number of places in the specification. As explained in the specification, the data structuring objects can operate on raw data content as opposed to requiring a conversion from the raw data to restructured form.
- "common user presentation interface and interaction format": This element is no longer used in the claims, however it should have been apparent that the element is taught in the original specification. Examples of common user presentation interfaces are shown in at least Figs. 7, 13 and 17a-c, the interaction format is a format suitable for presentation.
- "a master ontology": This element is no longer used in the claims, however it should have been apparent that the element is taught in the original specification. An ontology is a specification that represent the formal identity of data, including information such as relevant units of measurement, data source information, available actions or commands, content (data attribute), history (data state), relationships (including calibration, normalization and translation requirements) and related concepts assumed to exist in an area of interest. An example of a master ontology generator is the object translation engine, however to advance prosecution, "master ontology" was deleted from the claims. Object translation engines are clearly supported in the original specification, such as in Figs. 11 and

12. See also cites on page 40, lines 18-20; page 41, lines 32-33; page 42, lines 1-4 and elsewhere.

- "an ontology of data structuring objects": This element is no longer used in the claims; however it should have been apparent that the element is taught in the original specification. An ontology is a specification that represents a formal identity of data, including information such as relevant units of measurement, data source information, available actions or commands, content (data attribute), history (data state), relationships (including calibration, normalization and translation requirements) and related concepts assumed to exist in an area of interest. An ontology of data structuring objects is supported by at least the set of definition tables defined in the original disclosure, however to advance prosecution, "an ontology of data structuring objects" was deleted from the claims. Definition tables are clearly supported in the original specification. See, for example, Fig. 9, page 11, lines 16-25; page 67, lines 11-12 and elsewhere.
- "data point": Data points are well known in data processing and need not be explained in detail. A data set is a collection of data points.
- "pointer to a source of the data item": A pointer is well known in programming fields as a device to direct a program to a particular location. Examples of pointers in the specification include vector paths, file paths, URLs and other objects that operate as pointers. The specification discloses that pointers can point to sources and in particular to sources of data items pointed to by data objects. For example, an intelligent molecular object (IMO) is a data object that includes pointers to the source of the data associated with the data object. See, for example, page 23, lines 32-33 describing how an IMO can include a pane that included pointers to an original image file, where the image file contains the data associated with the data object. See also, page 14, lines 12-14, wherein the specification states: "...By using meta-data reference tables, pointers and tags to provide real-time translation and integration, which efficiently refers only to the aspects of any raw

data relevant to a specific query, the IMO IT Platform avoids data redundancy and data access locking requirements."

- "common user presentation and interaction layers": This element is no longer used in the claims.
- "intermediate data format": The "IMO" data format described at least at page 9, first full paragraph ("Data type translators are provided to automate transformation from heterogeneous data sources into IMO data in real-time.") The IMO data format is an intermediate data format. Other examples of various intermediate data formats include a global standard format ("These algorithms allow for the extraction of variable and non-variable regions within a set of data and generate a global standard to which all data can be referred."; page 20, lines 7-9), tables for property pane presentation ("An Application Definition Generator (ADG) component is provided, which automates the query of application and database requirements and is comprised within related translation components to generate tables required for integrated real-time property pane presentation at the data object level."; page 21, lines 8-11).
- "common format": This term appears in claim 60 in the element of "translation means for converting data associated with different data items into a common format". Applicant submits that it should be apparent from the context of the original specification and the claim language that data from different data items can be translated into a common format, i.e., a format that is common to the translated data items. See page 9, lines 9-12 and page 12, lines 5-7 in the original specification, which describe automating transformation from heterogeneous data sources to an empirically normalized data standard. That data standard would be a common format, as data from heterogeneous data sources would be transformed into a format that is common among the data. Other areas of the original specification describe other variations on transforming to a common format. See also for example, page 20, line 28 and page 21, lines 18-21.

- "data attributes and object attributes": The Examiner's objection is not well understood, but the point should be moot as this element is no longer used in claim 60, although data attributes does appear in other claims. Data attributes are clearly supported by the specification, at least as a type of meta-data. See page 10, line 25.
- "native form": This element is no longer used in the claims.
- "data content subset relationships": This element has been amended to recite "data relationships and data subset relationships". The specification as originally filed described apparatus for analyzing and otherwise defining relationships between data that were previously difficult to compare. In some embodiments described, this is done using IMOs, which represent original data in a standardized environment. Data relationships and apparatus and methods to analyze and define them are described in the specification as originally filed at, for example, page 51, lines 14-15 and page 55, lines 9-10; and page 20, lines 2-5. Data relationship definition via objects is further described at page 17, line 33 and page 18, lines 1-3. Finally, Figure 17B, which is described on page 55, lines 5-6, shows a graphical example of data relationships depicted using a dendrogram. As the specification explains, data relationships can also be analyzed as subsets, for example, through vectors and meta-data link descriptions. Data subset relationships might be defined through comparison as explained on page 20, lines 20-23. Figure 17C, provides a graphical depiction of data subset relationships, in that example showing several dimensions of data compared in cluster visualization format.
- "content relationships": This element is no longer used in the claims.

Applicant submits that the above comments and the amendments to the claims satisfy the requirements of the request for information under 37 CFR §1.105.

35 USC §103(a) Rejection

In response to the rejection under 35 USC §103(a), Applicant submits that Glynias fails to disclose or suggest each element of the independent claims 30, 53 and 60, as amended and therefore each of the claims are allowable over that reference.

Glynias fails to disclose or suggest each element of independent claim 30. For example, claim 30 as amended recites "at least one subset vector within the data structuring object", which is not disclosed or suggested by Glynias. Subset vectors within data structuring objects describe subsets of associated raw data. Glynias may provide wrappers around raw data, but this is not the same as having vectors representing subsets of the data. As explained in the specification, by referring to only a subset of the raw data reduces network traffic (as the entire data set need not be transferred) and use of raw data may eliminate the need for pre-converting data before use. Processing is done on typically small data subsets. Since vector subsets are defined, generated and used and may be applied to subsets of raw or object data, network traffic and processing burdens are minimized, and data integrity is maintained. See page 37, lines 4-7; page 20, lines 20-30 and page 61, line 18-20, respectively.

While Glynias does disclose lists of project manager items and calls these lists "vectors", they are not subset vectors. Glynias' vectors identify available items by Java classes that can implement those available items, whereas subset vectors identify subsets of data in associated raw data.

Glynias also fails to disclose or suggest each element of independent claim 53. For example, claim 53 as amended recites "accessing vector subsets of data corresponding to the data item in a raw data format", which is not disclosed or suggested by Glynias. Applicant submits that in view of the other amendments to claim 53, this step must be given patentable weight.

Glynias also fails to disclose or suggest each element of independent claim 60. For example, claim 60 as amended recites "master query search means for searching data objects as vector subsets", which is not disclosed or suggested by Glynias as Glynias does not deal with vector subsets.

In view of the above, Applicant submits that each of the Examiner's requests and rejections have been addressed by the amendments to the claims and these remarks.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 415-576-0200.

Respectfully submitted,

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